Name:

at1113exam: Expand, factor, and solve quadratics (v0)

1. Expand the following expression into standard form.

$$(5x - 6)(9x + 8)$$

$45x^2 + 40x - 54x - 48$

$45x^2 - 14x - 48$

2. Expand the following expression into standard form.

$$(6x + 5)(6x - 5)$$

$36x^2 - 30x + 30x - 25$

$36x^2 - 25$

3. Expand the following expression into standard form.

$$(8x - 5)^2$$

$64x^2 - 40x - 40x + 25$

$64x^2 - 80x + 25$

4. Solve the equation.

$$(9x - 7)(2x + 3) = 0$$

$x = \frac{7}{9}$ $\quad$ $x = \frac{-3}{2}$

5. Factor the expression.

$$x^2 + 7x - 18$$

$$(x+9)(x-2)$$

6. Solve the equation with factoring by grouping.

$$18x^2 - 24x + 15x - 20 \;=\; 0$$

$$(6x+5)(3x-4) = 0$$

$$x = \frac{-5}{6} \qquad x = \frac{4}{3}$$

7. Solve the equation.

$$5x^2 - 7x - 25 \;=\; 2x^2 - 5x - 4$$

$$3x^2 - 2x - 21 = 0$$

$$(3x+7)(x-3) = 0$$

$$x = \frac{-7}{3} \qquad x = 3$$

8. Factor the expression.

$$81x^2 - 64$$

$$(9x+8)(9x-8)$$